



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,341	12/18/2000	Gary W. Hall	349-003	5178

7590 03/30/2005

The Halvorson Law Firm
405 W. Southern Ave., Suite 1
Tempe, AZ 85282

EXAMINER

HARTMAN JR, RONALD D

ART UNIT	PAPER NUMBER
----------	--------------

2121

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/740,341

Applicant(s)

HALL, GARY W.

Examiner

Ronald D Hartman Jr.

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-22 are presented for further examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-22 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by the applicant's admission that all of the Figures of the pending application are Prior Art, especially in light of the fact that all of the Figures already appear in U.S. Patent No. 5,891,131, which was issued and was published more than one year prior to the filing of the instant application (09/740,341).

Specifically, with reference to Figures 6, 7-7A and [0084], all of the currently claimed features and or limitations are rendered unpatentable by the applicants admission that the Figures, specifically Figures 6 and 7-7A, are Prior Art. In other words, these Figures taken in conjunction with the specification do not provide for novel features and or limitations since the applicant has clearly admitted on the record that they are not, in fact, novel.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art

Art Unit: 2121

are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rajan et al., U.S. Patent No. 5,891,131.

Claim 1 sets forth the same features as claim 1 of U.S. Patent No. 5,891,131 except that U.S. Patent No. 5,891,131 does not specifically teach simulating a "strain relationship produced by... corneal deformation in response to a physical change" but rather teaches "simulating corneal deformation in response to a corneal incision." Therefore, since the strain relationship is merely a "strain value" that is derived from corneal deformations, although it is not specifically mentioned, it is an obvious variation of simply acquiring "a value" and therefore it is an obvious variation of step (c) wherein "a value is determined and this value is assigned to each element". Furthermore, a physical change is obviously formed by way of an incision or insertion (both viewed to be functional equivalents of one another, See Response to Arguments section below) to the cornea and the size, shape and thickness of an incision would obviously be derived by way of a modulus of elasticity to elements surrounding the incision since the properties of each incision dictate what the next step will be, and therefore, all of the claimed features and or limitations of claim 1 are adequately described by way of claim 1 of U.S. Patent No. 5,891,131 for at least these reasons.

Claim 2 sets forth the same features or limitations as claim 2 of U.S. Patent No. 5,891,131 except for the minor differences already explained by way of claim 1 above. Furthermore, although claim 2 teaches "changing the z coordinate of the nodes ..." and claim 2 of U.S. Patent No. 5,891,131 does not, this feature would obviously take place in order to effectively back calculate the necessary values, and therefore its inclusion would have been obvious to one of ordinary skill in the art at the time the invention was made.

Art Unit: 2121

Claim 3 claims essentially the same limitations and or features as claimed by way of claim 3 of U.S. Patent No. 5,891,131.

Claim 4 sets forth the same features or limitations as claim 4 of U.S. Patent No. 5,891,131 except for the minor differences already explained by way of claim 1 above. In addition, claim 4 refers to a physical change while claim 4 of 5,891,131 refers to a corneal ablation, however an ablation is a physical change and therefore they are obvious variations of one another. Furthermore, step (d) refers to "thermal shrinkage of a portion" while step (d) of U.S. Patent No. 5,891,131 refers to "an ablated portion". Since an ablation would obviously be formed by way of thermal shrinkage, via the claimed incisions, its use would have been equally obvious to one of ordinary skill in the art at the time the invention was made.

Claim 5 essentially sets forth the same limitations as claim 5 of U.S. Patent No. 5,891,131 except for the minor differences with respect to ablation and thermal shrinkage, which was already discussed above with regards to claim 4 and is applied equally herein.

Claim 6 sets forth the same features or limitations as claim 6 of U.S. Patent No. 5,891,131 except for the minor differences already explained by way of claim 1 above.

Claim 7 sets forth essentially the same features or limitations as claim 7 of U.S. Patent No. 5,891,131.

Claim 8 sets forth essentially the same features or limitations as claim 8 of U.S. Patent No. 5,891,131.

Claim 9 sets forth essentially the same features or limitations as claim 9 of U.S. Patent No. 5,891,131.

Art Unit: 2121

Claim 10 sets forth essentially the same features or limitations as claim 10 of U.S. Patent No. 5,891,131.

Claim 11 essentially sets forth the same limitations as claim 11 of U.S. Patent No. 5,891,131 except for the minor differences with respect to ablation and thermal shrinkage, which was already discussed above with regards to claim 4 and is applied equally herein.

Claim 12 sets forth essentially the same features or limitations as claims 12 and 13 of U.S. Patent No. 5,891,131.

Claim 13 sets forth essentially the same features or limitations as claim 14 of U.S. Patent No. 5,891,131.

Claim 14 sets forth essentially the same features or limitations as claim 15 of U.S. Patent No. 5,891,131.

Claim 15 sets forth essentially the same features or limitations as claim 16 of U.S. Patent No. 5,891,131.

Claim 16 sets forth essentially the same features or limitations as claim 17 of U.S. Patent No. 5,891,131.

Claim 17 sets forth essentially the same features or limitations as claim 18 of U.S. Patent No. 5,891,131.

Claim 18 sets forth essentially the same features or limitations as claim 19 of U.S. Patent No. 5,891,131.

Claim 19 sets forth essentially the same features or limitations as claim 20 of U.S. Patent No. 5,891,131.

Claim 20 sets forth the same features or limitations as claim 21 of U.S. Patent No. 5,891,131 except for the minor differences already explained by way of claim 1 above, as well as the minor differences with respect to ablation and thermal shrinkage, which was already discussed above with regards to claim 4 and is applied equally herein.

Claim 21 sets forth the same features or limitations as claim 23 of U.S. Patent No. 5,891,131 except for the minor differences already explained by way of claim 1 above, as well as the minor differences with respect to ablation and thermal shrinkage, which was already discussed above with regards to claim 4 and is applied equally herein.

Claim 22 sets forth the same features or limitations as claim 24 of U.S. Patent No. 5,891,131 except for the minor differences already explained by way of claim 1 above, as well as the minor differences with respect to ablation and thermal shrinkage, which was already discussed above with regards to claim 4 and is applied equally herein.

Response to Arguments and Claim Interpretations

5. As per claims 1, 4, 6 and 20-22, the claimed “physical insertion” is viewed to be the functional equivalent of a “thermal shrinkage” which is experienced by the patient’s eye, in modeled form, wherein the thermal shrinkage is caused by a change in the cornea, which as [0084] describes, can be made by way of ablations, incisions, and insertions.

Therefore, as claimed, the “physical insertion” is viewed to be the functional equivalent of *any action* that results in the thermal shrinkage of the cornea. That is, since [0084] clearly states that the thermal shrinkages may be caused by laser heating or cauterizing wires, the claimed “physical insertion” is viewed to be a functional equivalent of an incision caused by one of the aforementioned methodologies.

The applicant's arguments filed on 10/18/2004, which address the presently filed amendments to the pending claims, has been fully considered but is not persuasive for the following reason(s):

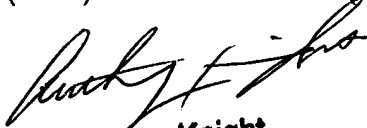
The applicant's argument that the amendment to the claims to include "a physical insertion" in comparison to the previously pending claim language which set forth "a physical change" does not overcome the present rejection using Rajan et al. since clearly an incision, a feature contemplated by Rajan et al., is a physical change, as was held in the previous office action mailed 4/16/2004, and it may also be interpreted to be the equivalent of a "physical insertion" since clearly an incision is an insertion, per se, of a cutting tool of some kind, and therefore the scope of the claimed invention is adequately contemplated by the teachings associated with Rajan et al.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald D Hartman Jr. whose telephone number is (571) 272 - 3684. The examiner can normally be reached on Mon. - Fri., 11:30 am - 8:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached at (571) 272 - 3687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Anthony Knight
Supervisory Patent Examiner
Group 3600

Ronald D Hartman Jr.
Patent Examiner
Art Unit 2121

X ROH